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## Ground state properties of doubly closed-shell nuclei with the Potential Harmonic Expansion Method

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### Abstract content <br> &nbsp; (Max 300 words)

Ground states properties of selected doubly closed-shell nuclei are studied using the Potential Harmonic Expansion method. The method transforms the many-body Schrodinger equation into an infinite set of coupled differential equations. The coupled differential equations are solved using an orthogonal collocation procedure. The resulting eigenvalue equation is solved via the Renormalised Numerov Method.

### Apply to be<br> consider for a student <br> &nbsp; award (Yes / No)?

yes

### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?

MSC

### Main supervisor (name and email)<br>and his / her institution

Prof ML Lekala

### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

yes

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